What is claimed is:

1. A method for implementing a raster image path architecture, comprising the steps of:

(1) capturing a source image so as to provide device-independent grayscale image data;

(2) generating associated segmentation information useful for optimal rendering of the image data as a binary image;

(3) storing the device-independent grayscale image data and the associated segmentation information;

(4) determining a target output device and using the segmentation information to convert the device-independent grayscale image data to a binary raster image optimized for the targeted output device; and

(5) submitting the binary raster image to the targeted output device.

2. The method of **claim 1**, further comprising the steps of computing the segmentation information at an intermediate platform and converting the device-independent grayscale raster image data to a targeted device-dependent binary raster image.

3. The method of **claim 1**, further comprising the step of generating the device-independent grayscale image data in the form of device-independent N-plane grayscale raster image data.

4. The method of **claim 1**, further comprising the step of determining the segmentation information inherent in the device-independent N-plane grayscale raster image data for converting the device-independent N-plane grayscale raster image data into a targeted device-dependent binary raster image.

5. The method of **claim 1**, further comprising the step of converting of the device-independent grayscale raster image data and associated segmentation information to targeted device-dependent binary raster image data with operation of an intermediate compute platform according to the determination of the targeted output device.

6. The method of **claim 1**, wherein the targeted output device further comprises a printer.

7.   A method for implementing a raster image path architecture, comprising the steps of:

(1) capturing a source image so as to provide device-independent grayscale image data;

(2) generating associated segmentation information useful for optimal rendering of the device-independent grayscale image data as binary image data;

(3) applying the associated segmentation information to create device-independent N-plane MRC image data;

(4) determining a target print engine having a print controller and determining whether the print controller can effectively process the device-independent N-plane MRC image data;

(5) in response to a determination that the print controller is capable of effectively processing the device-independent N-plane MRC image data, submitting the N-plane MRC image data to the print controller; and

(6) in response to a determination that the print controller is not capable of effectively processing the device-independent N-plane MRC image data, rendering grayscale overlay planes and flattening image layers, thus yielding device-dependent binary raster image data and submitting the device-dependent binary raster image file to the print controller.

8.   The method of **claim 7**, wherein the N-plane MRC image file further comprises a plurality of planes for supporting binary images and a plurality of planes for supporting a grayscale images.

9.   The method of **claim 7**, further comprising the step of storing the device-independent N-plane MRC raster image file.